

## **REMARKS**

### **Status Of Application**

Claims 33-42 are pending in the application; the status of the claims is as follows:

Claims 33-42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,748,277 to Huang et al. ("Huang") in view of U.S. Patent No. 6,236,385 B1 to Nomura et al. ("Nomura").

### **Claim Amendments**

Claims 33 and 38 have been amended to more particularly point out and distinctly claim the subject matter of their invention. These changes do not introduce any new matter.

### **35 U.S.C. § 103(a) Rejection**

The rejection of claims 33-42 under 35 U.S.C. § 103(a), as being unpatentable over Huang in view of Nomura, is respectfully traversed based on the following.

As in initial matter, it appears from the discussion at page 3 of the Office Action, that there is some confusion about 'amplitude' and 'polarity maintaining period' as used in the claims. For example, the two terms appear to be used interchangeably when the Office Action states that Nomura, "[i]n Figs. 9A and 9B, the pulse in T1, the reset period, is shown to have a *longer amplitude* than the pulse of the selection periods that follow. It would have been obvious to one of ordinary skill in the art to include wherein the *polarity maintaining period* is longer than that of the selection pulse so that the reset pulse has an alternating cycle which is longer than that of the selection pulse of Nomura...." It is respectfully submitted that one of skill in the art would understand that the amplitude of a pulse corresponds to the voltage of the pulse and the polarity maintaining period corresponds to the time that the pulse is at that voltage.

For example, Nomura shows in Fig. 9B three pulses during the reset step (indicated by T1). The amplitude of each pulse corresponds to the distance the pulse extends above or below the horizontal axis in Fig. 9B. The polarity maintaining period corresponds to the width of each half of the pulse. That is the period for which the polarity of the pulse is maintained. In Fig. 9B, the polarity maintaining period is the width of each individual cycle of the wave form; it is not the sum of the widths of the waveforms, or the width of the entire period.

To further clarify the claims, claim 33 has been amended to recite, *inter alia*, a method for driving a liquid crystal display by applying reset, selection and reset pulses, “wherein ... a pulse applied to the selected one of the scan electrodes during the evolution step has a polarity maintaining period of a single plus/minus cycle which is longer than that of a single plus/minus cycle of the pulse applied to the selected one of the scan electrodes during the selection step ....” That is, claim 33 requires that the width of pulse during the evolution step be longer than the width of a pulse during the selection step.

It is respectfully submitted that this feature of claim 33 is not taught or suggested by the cited references. To demonstrate, marked up copies of Fig. 5 from Huang and Figs. 9A/B from Nomura are attached.

Referring first to the marked up Fig. 5, Periods 1, 2, and 3 correspond the reset, selection, and evolution steps recited in claim 33. It is clear that Huang shows a polarity maintaining period (i.e., the width) of a pulse applied to the scan electrodes (e.g., to the rows) during the selection step is 1ms, and the polarity maintaining period of a pulse during the evolution period is 0.5 ms. That is, Huang clearly teaches that the polarity maintaining period of an evolution pulse is *shorter* than that of a selection pulse. This is the opposite of claim 33, which requires that the evolution pulse have a *longer* polarity maintaining period than that of a selection pulse. Thus, Huang fails to teach or suggest that “a pulse applied to the selected one of the scan electrodes during the evolution step has a polarity maintaining period of a single plus/minus cycle which is longer than that of

a single plus/minus cycle of the pulse applied to the selected one of the scan electrodes during the selection step” as required by claim 33.

Turning now to Nomura, the marked up copy of Figs 9A and 9B show that the periods indicated by T1 and T4 correspond to the reset and evolution steps recited in claim 33. Periods T3 and T6 generally correspond to the selection step of claim 33, with waiting periods T2 and T5. Nomura does not provide any indication that the drawings are to scale, and does not otherwise indicate the relative widths of the pulses during the rest, selection, and evolution steps. As stated previously, it is improper to rely on the relative sizes of features in a drawing unless it is explicitly stated that the drawing is to scale. Therefore, no information on the relative widths of the selection and evolution pulses can be gleaned from Figs. 9A and 9B. Moreover, even assuming *arguendo* that Fig. 9B is drawn to scale, the pulses in the evolution step (T4) appear to have the same width as the pulses of the selection step (T3,T6). Thus, Nomura also fails to teach or suggest that “a pulse applied to the selected one of the scan electrodes during the evolution step has a polarity maintaining period of a single plus/minus cycle which is longer than that of a single plus/minus cycle of the pulse applied to the selected one of the scan electrodes during the selection step” as required by claim 33.

In view of the foregoing, it is respectfully submitted that neither Huang, nor Nomura teach “a pulse applied to the selected one of the scan electrodes during the evolution step has a polarity maintaining period of a single plus/minus cycle which is longer than that of a single plus/minus cycle of the pulse applied to the selected one of the scan electrodes during the selection step.” Accordingly, the combination of the two references cannot teach this feature of claim 33. Therefore, the combination of Huang and Nomura is distinguished by claim 33, as well as by claims 34-37 which depend therefrom.

Claim 38 has been amended to recite, *inter alia*, that “a pulse applied to the selected one of the scan electrodes during the evolution step has a polarity maintaining period of a plus/minus cycle which is longer than that of a plus/minus cycle of the pulse

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applied to the selected scan electrode during the selection step.” As provided above regarding claim 33, it is respectfully submitted that this feature of claim 38 is not disclosed, taught, or otherwise suggested by the cited references. Therefore the combination of Huang and Nomura is distinguished by claim 38, as well as by claims 39-42 which depend therefrom.

Accordingly, it is respectfully requested that the rejection of claims 33-42 under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Nomura, be reconsidered and withdrawn.

### **CONCLUSION**

Wherefore, in view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

This Amendment does not increase the number of independent claims, does not increase the total number of claims, and does not present any multiple dependency claims. Accordingly, no fee based on the number or type of claims is currently due. However, if a fee, other than the issue fee, is due, please charge this fee to Sidley Austin LLP Deposit Account No. 18-1260.


If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

Any other fee required for such Petition for Extension of Time and any other fee required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee,

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No. 18-1260. Any refund should be credited to the same account.

Respectfully submitted,

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May 17, 2006